# Positive Health Effects Of Chocolate

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## Positive

Some studies confirm that chocolate, consumed in moderation, is good for health. But above all, it's very good! Chocolate must be part of a healthy and balanced diet without reducing the consumption of other foods that are very important for health, such as fruits and vegetables, while the daily practice of moderate physical exercise is equally important.

## Chocolate, The Antonym Of Stress?

This is due to the composition of dark chocolate: carbohydrates, magnesium, and phenylethylamine. Its effects on stress, anxiety, and mood have been widely tested.

## Chocolate As A Stimulant

Chocolate acts as a stimulant of the central nervous system, thanks to the fact that cocoa beans contain theobromine, an alkaloid with a similar function to caffeine.

## Beneficial Effects Of Flavonoids. Chocolate Is Good For The Heart.

Its properties are important for proper cardiovascular activity due to the high level of flavonoids (natural compounds present in plants that inhibit platelet activity, improving blood flow). It must, however, be borne in mind that white chocolate does not seem to possess these apparent beneficial effects on the heart since flavonoids are found only in cocoa solids and not in cocoa butter.

## Beneficial Effects Of Polyphenols

Numerous epidemiological studies have shown for years that the consumption of antioxidants in the diet and healthy lifestyle habits has a beneficial effect on neurodegenerative disorders such as Alzheimer's or Parkinson's. It is especially aimed at the neuroprotective effects of polyphenols (active

biocompounds present in various plants and derived products, such as cocoa or wine). Other studies have also analyzed the anti-carcinogenic effects of these. However, most of these articles have only focused on the antioxidant properties of these compounds (flavonoids have the ability to neutralize free radicals) without deepening their mechanisms of action at the cellular and molecular level.

## New Evidence Of The Beneficial Effects Of Cocoa Polyphenols Against Neurodegenerative Diseases

According to a study by the Università degli Studi L'Aquila (Italy), cocoa polyphenols not only act as antioxidants but actively prevent the death of neurons through the activation of a molecule responsible for regulating the growth and function of the cells.

Everyone is unanimous in saying that the best option is bitter chocolate, rich in cocoa. It is in the fruit that the main benefits of chocolate are found. In the milk version, the substance also appears, only in smaller amounts, while in white chocolate, only the cocoa butter is left—that is, only the fat (Harvard T.H. Chan School of Public Health, n.d.).

According to Daniel Magnoni, director of clinical nutrition at the Hospital do Coração (HCor), Brazilian legislation states that a product can only be considered "chocolate" if it has more than 25% cocoa. Therefore, he advises you to read the package before you eat.

"Bitter chocolate that has more than 70% cocoa is beneficial to cardiovascular health because it has flavonoids that work by lowering total and bad cholesterol. It even improves the arterial elasticity that helps control hypertension and has a caffeine-like substance that would act to prevent atherosclerosis," says the neurologist.

On the other hand, if you exceed the amount of 50 grams per day – equivalent to a bonbon or a little more – it can lead to a number of health problems and weight gain.

"Chocolate has about six calories per gram; that is, a hundred-gram bar is going to have 600 calories. It can promote obesity. And in the case of milk chocolate, you can have lots of saturated fat that comes from milk, helping to raise your cholesterol as well," says Magnoni.

Nutritionist Michele Grilo Barone of Beneficência Portuguesa Hospital in São Paulo makes the point that bitter chocolate tends to be less accepted because it is less sweet and harder. However, it gives a hint to whoever accumulates Easter eggs: "Since an Easter egg has at least one hundred grams, the ideal is to share with the family or to eat slowly."

For neurologist Sylvana Braga, even milk chocolate has its benefits, which include improving mood in depressed people and focus in those who lack attention—as long as it is consumed in moderation.

# Recent Searches

Studies show other facets of the most popular Easter candy. The latest from an American university showed that the body mass index (BMI) of people who ate chocolate daily was lower than that of people who did not have the habit.

For Braga, chocolate can even help you lose weight if people who are eating poorly opt for a portion of the candy in the snack instead of eating a packet of saltine. “But in these situations, it is better to be bitter,” he points out.

For Magnoni, it is not possible to associate weight loss with chocolate consumption without associating it with physical exercise practices and healthy eating. “These works do not account for other factors such as lower intake from other sources and exercise. But chocolate alone does not solve anything, “he says.

The benefits of chocolate in controlling pressure and cardiovascular disease have also been addressed in recent research from the University of L’Aquila in Italy. Both take into account the action of flavonoids, in arguments similar to Magnoni.

In the Italian research, the study led by Davide Grassi concluded that the flavonoids present in cocoa, when consumed through chocolate by hypertensive and diabetic patients, were able to reduce blood pressure.

Despite the positive opinions that bitter chocolate has received in the media for the many benefits it offers for health, an article from “USA Today” stated that more information is needed before starting to eat this chocolate without control. Chocolate contains large amounts of butter, sugar and cream, which can make you break your diet. If you occasionally eat a piece of chocolate to relieve stress or to satisfy a craving, that’s fine, but consuming too much can have harmful effects on health.

# Weight Gain And Coronary Heart Disease

A chocolate bar with milk of 1.55 ounces or 44 grams contains 235 calories, 13 grams of fat, 8 of which are saturated fats, and 21 grams of sugar. An ounce of bitter chocolate, or 28.35 grams, contains 156 calories, 9 grams of fat, 5 of which are saturated fats, and 13 grams of sugar. Saturated fats raise the level of cholesterol in the blood, which increases your risk of coronary heart disease and heart attacks. Sugar added to chocolate has no nutritional value, which leads to weight gain and coronary heart disease, according to the American Heart Association. If you are going to eat a piece of chocolate, Alice Lichtenstein, a Tufts University teacher, recommends that you eliminate other treats that day and walk 30 more minutes to counteract the effect of the additional calories you are consuming.

# Diabetes And Cavities

A bar of milk chocolate has 26 grams of carbohydrates, and an ounce of bitter chocolate has 17 grams, most of which come from sugars or refined carbohydrates. Refined carbohydrates cause spikes in the blood sugar level, which can cause your body to become resistant to insulin over time and can lead to type 2 diabetes. Excess blood sugar can also cause you to go to the dentist more often than you want because of tooth decay and cavities.

# Gastroesophageal Reflux

Gastroesophageal reflux is a problem in which the contents of the stomach return to the esophagus and produce acidity. Chocolate causes the sphincter of the esophagus to relax, which allows the stomach contents to travel upwards, giving you that feeling of acidity in the chest. The National Digestive Diseases Information Clearinghouse recommends that you avoid chocolate to control this problem.

# Effects Of Caffeine

Caffeine stimulates your central nervous system, which is why a piece of chocolate can wake you up when your aunt becomes tedious, but caffeine has no nutritional value. If you consume many foods that contain caffeine, such as chocolate, you can suffer from tachycardia, anxiety, depression, tiredness, sleep problems, tremors, nausea and vomiting, says Medline Plus. Bitter chocolate contains more caffeine than milk chocolate, and both contain theobromine, a substance related to caffeine.

# Positive

Much research has already attributed positive health effects to chocolate—among them, the ability to improve memory and thinking in the elderly, to help with weight loss, and to protect the heart. Most of these benefits were associated with flavonoids, compounds with antioxidant and anti-inflammatory properties found in cocoa (Ried et al., 2012).

Now, a new study helps explain how chocolate, especially bitter, works in the body, leading to improvements in the cardiovascular system. According to the authors, the food helps restore the flexibility of the arteries, prevents vessel hardening, and also prevents white blood cells from leaving the bloodstream and attaching themselves to the artery wall.

Both vessel hardening and accumulation of these cells in the walls of the arteries are known risk factors for atherosclerosis, a disease consisting of clogging vessels and reducing blood flow.

# Read Too:

Men who eat chocolate suffer less stroke, study says

The new research conducted at the University of Wageningen in the Netherlands also found that this benefit of chocolate is not necessarily due to flavonoids. That is because, in tests, the effect on the arteries was the same regardless of the amount of the compound present in the chocolate.

Comparison – Forty-four overweight men participated in the study. For four weeks, they ingested 70 grams a day of bitter chocolate (about four squares) with a high flavonoid content. Then, they spent another four weeks consuming the same amount of ordinary chocolate (with fewer flavonoids). The two chocolates, however, had the same amount of cocoa. The researchers measured a number of factors related to the vascular health of volunteers before and after each period of food consumption.

“We provide a complete picture of the impact of chocolate consumption on vascular health, showing that increasing the concentration of flavonoids does not increase the benefits in that regard,” says Diederik Esser, study coordinator. The research will be published in the March issue of the Faseb Journal.

## 1. Protect Your Heart

Among the research that points to the positive effects of chocolate consumption, the most numerous are by far the ones that associate food with benefits to the heart. According to a study published last year in the British Medical Journal (BMJ), for example, it is possible to lower the risk of cardiovascular events by eating bitter chocolate (with at least 60% cocoa) every day. Another study, done at Cambridge University and released in 2011, measured how beneficial chocolate can be to the heart: according to the study, moderate consumption decreases the risk of heart disease by 37% and the chances of stroke by 29%.

Part of the reduction in the chances of heart disease caused by chocolate can be explained by the fact that it, before that, prevents the onset of risk factors for the heart, such as hypertension or high cholesterol. According to Australian research published in 2010 in the journal BMC Medicine, for example, bitter chocolate helps to lower the blood pressure of people suffering from hypertension.

## 2. Helps You Lose Weight

In 2012, a study by researchers at the University of California, San Diego, in the United States, broke the myth that chocolate is fattening and even concluded, surprisingly, that food can actually help a person to lose weight. This is because, of the 1,000 people who participated in the research, those who ate chocolate more frequently, although consuming more calories in one day, presented, on average, a lower body mass index (BMI). This relationship occurred mainly when the individual

consumed bitter chocolate. According to the study's authors, it may be that the calories in chocolate are neutral – that is, that small amounts of food benefit the metabolism, reduce the accumulation of fat in the body and thus compensate for the calories consumed. In addition, researchers believe that the antioxidant properties of chocolate are behind the positive effects demonstrated by the work.

Chocolate is good for the heart! Its consumption in moderate amounts significantly reduces the risk of having atrial fibrillation (AF) and abnormal heart rhythm (arrhythmia) that originates in the heart atria.

Consuming a small portion of chocolate 6 times a week can effectively prevent arrhythmia, a heart disorder that consists of irregular heartbeats.

To confirm the finding, researchers from the Harvard T.H. Chan School of Public Health conducted a large study of men and women in Denmark.

Previous studies have suggested that foods containing cocoa, particularly dark chocolate, or those with a higher cocoa content than milk chocolate confer cardiovascular benefits, probably because of their high flavonoid content, which may increase the functionality of blood vessels.

Chocolate, especially dark, bitter chocolate, when consumed in small amounts daily, relaxes, reduces stress, may help with weight loss, and is also good for the heart.

Read more:

# Understanding 10 Myths About Chocolate

But as for the association between chocolate and the occurrence of AF—which affects millions of people around the world and is linked to an increased risk of stroke, heart failure, cognitive decline, dementia, and death—research has only recently emerged. The study, Danish Diet Cancer and Health, lasted 13 years and took place in Denmark, involving a very large sample of 55,000 male and female volunteers. That is, it is a very reliable study.

During the research period, researchers looked at the habits and lifestyles of all participants and parameters such as body mass index, blood pressure, cholesterol level, and the presence of cardiovascular disease or diabetes. Thus, they identified 3,300 cases of atrial fibrillation, but in cases where chocolate was introduced into the diet, the risk of fibrillation was reduced by a total of 17%.

In men, it has reached 20% with 6 pieces of chocolate per week, while in women, to obtain such benefits, one should not exceed the limit of consumption of a chocolate bar in seven days.

The conclusion is that consumption of chocolate, in small quantities, can have a positive effect on health. On the other hand, however, large portions of chocolate are harmful because of excessive amounts of sugar, fat, and calories.

“We observed a significant association between chocolate and FA risk suggesting that small amounts in cocoa consumption can have a positive impact on health. Eating excessive amounts of chocolate is not recommended because many products have too many calories due to the presence of sugar and fat, which in contrast can lead to weight gain and other metabolic problems, but moderate consumption of high-cocoa chocolate may be a healthy choice,” says Elizabeth Mostofsky, a professor in the Department of Epidemiology at Harvard Chan School and lead author of the study.

Cravings are common during pregnancy, and if your chocolate craving has been uncontrollable, you may like to know that there are good reasons to give in to temptation: according to a new study, sweet consumption helps in the development of the baby.

Experts at the University of Laval, Canada, have found that eating chocolate improves placental function and promotes the development of the fetus. To reach this conclusion, 120 women were evaluated between the 11th and 14th weeks of gestation and divided into two groups: the first ate high-flavonoid chocolate and the other ate low-flavonoid chocolate, considered the “common” type. Each one ingested about 30 grams per day for 12 weeks.

The results showed that there were no differences between the rates of pre-eclampsia, placental or child weight at birth. However, the pulsatility of the uterine arteries, which indicates better fetal and placental blood flow, was much higher in the study participants than in the general population.

Researchers believe that this indicates that the consumption of chocolate, even chocolate that is not rich in flavonoids, has a positive impact on placental improvement and fetal growth.

Chocolate consumption can help fight heart disease, such as atrial fibrillation (AF), a subtype of arrhythmia characterized by rapid, irregular beats in the heart atria. Researchers have identified the benefits of cocoa and its high flavonoid content, which produce anti-inflammatory, anti-haemorrhagic and anti-allergic effects in a study released Tuesday (23/5) by Harvard University.

“Our study shows the health benefits of moderate chocolate consumption and highlights the importance of behavioral factors to potentially lower the risk of arrhythmias,” Elizabeth Mostofsky, an instructor at the Harvard Department of Epidemics, explains in a news release. The work was published in the journal Heart.

According to the research, pure cocoa and cocoa in food—particularly in bitter chocolate, whose cocoa content is higher than that of milk chocolate—give the cardiovascular system more benefits because of the high level of flavonoid compounds, which help maintain the health of blood vessels.

Of the 55,500 men and women who participated in the study, there were 3,346 cases of AF in the follow-up period, about 13 years. People who ate one-third portions of 28g of chocolate per month had a 10% lower rate of illness than the group that consumed less than one serving per month. Those who ate a portion per week had a 17% lower rate, and those who ate two to six servings per week had a 20% lower rate.

# With Moderation

The researcher, however, points out that the intake should be moderate. “Eating excessive amounts of chocolate is not recommended because many products are high in sugar and fat calories and could lead to weight gain and other metabolic problems. But moderate intake of high-cocoa chocolate may be a healthy choice,” says Mostofsky.

In the study, participants’ body mass index, blood pressure and cholesterol were measured at the time of recruitment between December 1993 and May 1997. They also analyzed other health conditions and lifestyle factors using questionnaires.

“Despite the fact that most of the chocolate consumed by participants has relatively low concentrations of potentially protective ingredients, we still see a truly significant association between eating chocolate and a lower risk of AF—suggesting that even small amounts of cocoa have a health benefit,” concludes the specialist.

# What Is Atrial Fibrillation

Atrial fibrillation affects 2.5% of the world’s population, equivalent to 175 million people. It is the second largest cause of death in the world. This cardiac arrhythmia is increasingly associated with advancing age, mainly affecting the population in the range of 75 to 80 years of age.

# Chocolate Industry

After three years of low sales at Easter, the chocolate industry is betting on a positive year. Chocolate consumption has grown 8% in the first half of 2017. Sales during the holiday season are expected to remain stable year-on-year or increase slightly. To attract the consumer, companies invest in innovation and cheaper products.

“In recent years, we have seen atypical behavior in the industry which, coupled with a strong economic crisis, has forced companies to review their strategies and adapt to the new scenario. We are optimistic that this year’s figures will confirm the maturity of the industry and its ability to organize in a more stable economy, “said Ubiracy Fonseca, president of the Brazilian Association of the Chocolate, Cocoa, Peanut, Bullet and Derivatives (Abicab) Industry.

# Read The Latest Economy News

With the production in progress, the generation of temporary employment in 2018 was 5.9% lower than the same period of 2017. Among employees allocated to the industry and vendors, about 23,000

people were hired. The good news is that the decline is below the 2017 comparison with 2016, when the number of temporary jobs was 15% lower.

After the most severe period of the crisis, the country's economy had a slight improvement and left the recession at the end of last year. Falling inflation, coupled with lower interest rates and renewed consumer confidence, indicate growth in retail sales as a whole. Christmas sales, for example, grew 6% according to data from the Brazilian Association of Shopping Tenants (Alshop).

# Lower Prices Should Attract Consumers

Maricy Gattai Porto, who is Marketing Director at Kopenhagen, said the brand expects a 10% increase in sales. "The economic context is improving, and we understand that this will have an impact on Easter." According to her, the company has sought to broaden the target audience. "We offer more medium and low disbursement products. It is possible to buy chocolate tablets between $3 and $5, which we did not have before," she says.

In 2017, almost 9 thousand tons of chocolate were produced, equivalent to 36 million eggs, a volume 38% lower than in 2016. There is no estimate yet for this year, but the number of launches is already the same as last year, with about 120 new products.

For Garoto's marketing manager, Keila Broedel, the consumer has adapted to the new reality and is more rational when it comes to buying. "We believe 2018 will be a little bit better." The strategy is to attract the public by the price of the products. "Today, 100% of our portfolio costs below R $ 49.90," he explains.

The idea of more affordable prices is the tone of the market. "We brought this rule to suit both the consumer and the market. We have the most affordable product, under $10, up to the premium that is around $69, "says Juliana Braga, marketing manager at Ferrero Rocher.

After a disastrous 2016 for the sector, last year showed signs of recovery, and it is a consensus in the market that the pace of growth, still slow, should be maintained at Easter this year. Lacta's marketing manager, Ricardo Reis, said he expects market growth as a whole to be around 5% to 8%. With the proposal to innovate in the products, the brand's major novelty this year is mobile applications that interact with products in the children's line. "For example, the Transformers, a license of ours, has an application where the child can synthesize his voice equal to one of the characters in the movie and then share it on social networks. It's a way for us to better connect with this new, more digital audience, "explains Reis.

Although it is the fifth-largest producer of chocolate, Brazil still has low consumption compared with other countries. While here, annual consumption is 2.5 kg per inhabitant, in neighboring countries, such as Argentina, consumes twice as much (Clark et al., 2018).

* Trainee under the supervision of Jacqueline Saraiva

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